

LANGUAGE IN EDUCATION: AN INTERVIEW WITH LEO VAN LIER*

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Leo van Lier is Professor of Educational Linguistics at the Monterey Institute of International Studies in California and is Director of its Center for Language in Education and Work (CLEW). He took his doctorate at Lancaster University and is the author of *The Classroom and the Second Language Learner*, one of the first books to deal thoroughly with research in the second/foreign language classroom. Leo van Lier is a strong advocate of incorporating ethnography and qualitative discourse analysis into educational research in the classroom. Among his current research interests is the question of the development in the pupil of language awareness, i. e. the capacity to think about language, its structure and its usage in order to make the process of learning a language more effective and more efficient. This interest has already borne fruit in the form of his two most recent books, *Introducing Language Awareness* (in press) and *Interaction in the Language Curriculum: Awareness, Autonomy and Authenticity* (in press).

El paper de la llengua en l'educació: una entrevista amb Leo van Lier

Leo van Lier és professor de lingüística educativa al Monterey Institute of International Studies (California) i Director del CLEW (Center for Language in Education and Work) d'aquesta mateixa institució. Va realitzar els seus estudis de doctorat a la Universitat de Lancaster i és autor de *The Classroom and the Second Language Learner*, un dels primers llibres que tracten el tema de la investigació a la classe de llengua segona/estrangera d'una manera exhaustiva. Leo van Lier és un ferm partidari d'incorporar a la investigació pedagògica els mètodes analítics de l'etnografia així com l'anàlisi qualitativa del discurs a l'aula. Entre els seus interessos investigadors actuals destaca el desenvolupament en l'alumne de la capacitat de reflexionar sobre el llenguatge (*language awareness*), les seves estructures i usos, amb la finalitat de fer més eficaç y eficient el procés d'aprenentatge d'una llengua. Fruit d'aquest interès són els seus dos darrers treballs: *Introducing Language Awareness* (en premsa) i *Interaction in the Language Curriculum: Awareness, Autonomy and Authenticity* (en premsa).

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This is the transcribed version of an interview with Dr Leo van Lier, Professor of Educational Linguistics at the Monterey Institute of International Studies in California. The interview took place in February 1994, while Professor van Lier was giving a two-week seminar at the Universitat de Lleida.

What would you say is the unifying thread that defines your research on language pedagogy?

What unifies my research is the belief that education and language are very closely related, in fact, it is almost impossible to separate them. You cannot do pedagogy without language, and language learning is the essence of pedagogy. I think that language is important for learning in at least three ways: one is the importance of language growth in thinking, including the expression of thought, because thought and its expression are very closely related to language. The second reason is that language is obviously central to social development both at home and in the school. The third reason is that I think that language is the key to achieving equality in education and that relates basically to the way language is used in educational institutions not just to transmit information, but also to either liberate the student or turn him or her into a conformist, a "homo docilis" as Foucault put it. I think that that is, in a sense, the key to the type of pedagogy that I am recommending, because the teacher's interaction with the students is central, since the way the teacher interacts with the students determines to a large extent how the institution treats its students. So these are the three ways in which language is important in education: importance for thinking, importance for social development and importance for achieving equality in education.

In your ideas about language and education, what have been the main influences?

I could put them into three categories: first, psychology, or educational psychology, and there I would mention Vygotsky and Bruner. Vygotsky because of his placing the social interaction central in the child's education. Bruner because he developed this idea further through his notion of scaffolding. The second level would be the level of linguistics, and there I would say that Halliday has been the main influence, because Halliday looks at language not as a static product but as a process where at any one moment when you are using language you have got a number of choices

before you, and you make those choices out of a system or system of systems of options. That is Halliday's functional grammar, and I think that it is very important in education. So that is the linguistic side. The third level would be the work of Earl Stevick in applied linguistics, who has always taken a very down-to-earth and, at the same time, a very humanistic approach to language education in a number of books. The first one I remember reading when I was doing my Master's Degree was *Memory, Meaning and Method*, I don't know if you remember that one. A very good book. That was one of the first books I read and it impressed me a lot, and since then I've met him on a number of occasions and he is one of the clearest thinkers, as well as one of the most morally explicit thinkers, in our field. So those three, then, the psychological side, the linguistic side and the applied linguistics side, I think, have been my main influences.

One has the impression when you are talking about reproducing the social life of the institution, the language of the institution... it reminds us a little bit of Bourdieu and other sociologists.

That's right. Yes, that's certainly also a very strong influence, a more recent one, I think. As soon as you start talking about such things as language awareness and interaction in the classroom you, at some point, have to deal with his work, because both interaction and awareness lead to a critical view of the whole process of education, and he is one of the clearest examples, one of the most consistent examples of working in that area since the 60's. But his work has only recently become widely available in the English speaking world.

In your work the classroom has always been a key concept, and it is presented both as a research context and as a learning context. Could you tell us a bit more about the role you assign to the classroom?

It is very hard to separate those two things. One of the things that's always bothered me is that the classroom is regarded as an artificial environment for language. This is very common in the literature. You always read about it. Teacher talk is artificial and the kinds of questions and answers that are given are artificial, and in fact for some years there has been a trend to try and make the classroom look as little like a classroom as possible, to turn it into... not a classroom, and it seems to me that that is counter-intuitive, because people come to the classroom because it is a classroom, and you don't make it more natural by pretending it is not a classroom. So there is a paradox there of naturalness. The classroom, for most students, is the place where they either become interested in learning or become uninterested in learning. That is the key of it. It is not a question of the naturalness of the language, because it has... it ought to have its own pedagogical naturalness, which does not have to be the same naturalness as the bar down the street, or the discotheque, or the beach, or wherever else people might use language. The classroom should be respected in itself as the place where people go to learn language and, therefore, its authenticity should not be compared to authenticity in other places. I am not sure that one can say, apart from that, whether or not learning actually takes place within the classroom in the hour that you have the lesson. In fact, in one of my papers I have said that it seems to me that most learning has to go on between the lessons,

rather than in the lessons. And that, on the surface, sounds like saying that classrooms are not important if you do the learning outside them anyway. But the impetus for the learning has to come from the classroom. The classroom should give the students the curiosity and the sort of puzzlement to work with the language in their heads and to notice the language outside the classroom - wherever they see it, wherever they find it- to be busy with the language in some respect, especially in places where you only have 2 or 3 hours a week. It is foolish to hope that that is enough to do the job, that is, that the learning can be limited between the beginning and the end of the lesson. A lot of mental work has to go on outside the lesson. Therefore, it is of crucial importance to use the lesson as motivation, to motivate the students to be busy with the language when they are not in the classroom. Otherwise, we could not expect it to be successful.

Maybe we could connect this with a question we had set up for a later stage in the conversation: to you, what does it mean to be a teacher and a researcher at the same time? First of all, is it possible? And, if it is possible, are there any pros and cons to this?

I would say that it's inevitable in a sense, depending on how you define research. It's inevitable because if you are a teacher you, as any other professional, are always planning how to do things, you are always monitoring how you are doing them and you are always thinking about how to do them better next time -at least any conscientious teacher who is not totally lost in routine would do so. So, at that level of research, teaching is research. However, of course, there is also a scientific definition of research. We have to ask ourselves what does that mean, what definition is that. In that definition research is a certain sequence of actions that might be sanctioned by a certain theoretical position such as an operationalisation of definitions, a control of variables, a list of statistical measurements that have to be undertaken in a certain sequence. Then you are defining research in a theoretically narrow way. That sort of research is also necessary, even in the classroom, but it's not enough. I think that teachers have to do their own research. They are already doing it anyway, but I think that every teacher can benefit from doing it more systematically. If you are not doing it systematically the chances always are that you are going to be controlled from the outside -some new method that comes along, somebody who tells you this or that, you have to do it this way or that way- but if you are doing explicit research, and you are documenting it, you talk about it with colleagues, and so on, then you are in control of your own actions, you have a stronger foundation on which to base your own choices rather than having to rely on other people making them for you, so it's a liberating thing.

Would Action Research be the answer for those teachers who want to really do research in the classroom in a systematic way?

It would have to be, because...

Could you define it a little bit?

Action Research is research in action, i. e. it is research that is done on the job, while you are doing your work. It is just done in a more systematic way and it's cyclical in the sense that you go through a sequence of planning, acting, monitoring, observing, reflecting and changing your questions or rephrasing, sharpening your questions and changing your plans, and so on. So it's an ongoing probing of your own educational reality or professional work which is open-ended and it is done while you are doing the work, so it's practice-based rather than theory-based. The alternative would be that you, as a teacher, would get a year off to do it, something like that, but no teachers do. So reality tells us that the only viable research for a teacher is Action Research, it has to be done on the job.

Could you tell us a little bit about the origins of this type of research?

It was begun, I think, in the 40's in the U. S. , and the name that comes to mind is Kurt Lewin, the psychologist who did what he called Action Research in organisational settings, in government offices, to study the effects of racism and ethnic problems that they had, presumably, at that time. It was his view that research was too important to be left for publication in journals and in academic spheres, but it had to be put right into the service of pressing problems that faced society. From there it went into education, but it didn't flourish very much because of the predominance of outsider research that was the hallmark of psychometric tradition and the behaviouristic learning theories that were then in vogue. In Britain, I think, it came up a little bit later in the 60's and the 70's, particularly with the work of Lawrence Stenhouse, who was a great innovator and guru of the process curriculum in Britain. All his students and colleagues, such as Douglas Barnes and Harold Rosen, very much promoted the idea that the teacher should be a researcher, that it wasn't enough for an academic to come into the school and study the teaching that went on there, but it had to be done by the teachers themselves, since they are the only insiders and know the process of education. The outsider can never have the same kind of knowledge that the insider has. Widdowson, for example, makes a distinction between outsider research and insider research. Outsider research is the academic that comes in, does a study and then goes out again and publishes it somewhere else. Insider research is done within the school by the teacher and his or her colleagues.

Many language teachers, when asked about their background in linguistics and how useful they think that background they had at university has been to their present job, either say that they are very skeptical about it or that it helped them very little. What do you think is the reason for this?

You don't want to insult anybody, of course, but it seems to me that linguistics generally has been taught in a very decontextualised way, i. e. as form, as grammar, as rules, as syntax, as phonology, as morphology, but as isolatable pieces, building blocks or products, and it's turned into very dry material in that way. There is a line from a poem by Wordsworth which talks about this type of thing in science in general and it says 'we murder to dissect'. Applying that to language, you have the feeling that you have to kill the language and then start picking it to pieces. But, you see, one could try to study it as a living thing, not kill it, and look at it as

something that does things, and moves, and that is part of our lives personally and socially. That would make it into a totally different kind of study. This is not done very much, and certainly linguists are not used to looking at language in that way, with the exception, perhaps, of people like Halliday. The other reason is, I think, that the quality of teaching at university just has not been very high. The quality of teaching linguistics in particular

Are you speaking of teaching in general or just the teaching of linguistics?

No, I think linguistics. It seems to me -I don't know why it is- but it seems to me that very often language has been taught badly. If language teaching has been about language, it has been done in very unimaginative ways, with lots of tree diagrams being drawn, lots of lists of words of rules and exceptions and all that kind of stuff, whereas too little attention has been paid to language as it is used in society, outside, every day, on the radio, on television, in newspapers, by people in the street. If we used that as our textbook, as it were, and bring that in and study it, then I think it would be of interest. I think that linguistics should be of great interest to language teachers, it has to be. But I think that it has to be a different kind of linguistics, it has to be done taking the living, organic language as its basis. It's almost like in biology. You could study biology in two ways. One, you could go into a lab and dissect dead animals, or look through the microscope at cells, or maybe watch rats running around a maze. And another way would be to go into the forest and see how animals live. I guess there is room for both, but, of course, if you are a biology teacher, your students at school would probably be interested in fieldwork, at least for part of the time. I think we have done too little of that language fieldwork and too much of the dissecting and studying the dead matter, the dead tissue of the language. So I think that that has to be changed. But teachers can only teach language, teach the living language, if they themselves have been taught the living language, because we tend to reproduce our former teachers in our own teaching. So the change has to be gradual, I think, starting with teacher education.

In your opinion, what would be the main foundations for a relevant model of language for language teachers? We remember, for example, that Michael Stubbs in his book mention description, theory and practice as three ways in which a linguistic topic may be approached.

I don't like to divide theory and practice too much, because we tend to put things into boxes, and once we've done that we have to find ways to put theory into practice and you get a kind of hierarchy of operation. I would rather say: 'don't make any difference between theory and practice. Use practice to theorise and use theory to make practical'. And I would say that the foundation of a relevant model for language teachers would be one that sees language as embedded in a context, always contextualised. You cannot use or study language outside a particular context. Just think of a sentence. If a student has a sentence and he has to translate that, he has got to think about a context in which that sentence would be used in order to be able to translate it. So every time, then, that you use language, it is in a context. But very often, of course, in classrooms language is given

decontextualised, and I think that that is one of the problems with language teaching. We should contextualise language, or at least recontextualise it, once we have it in there. If language has been decontextualised to bring it into the classroom, we have to recontextualise it in order to work with it. So one thing is content and another is what I said before about process, about language as process. I don't think that we can teach language as a product, because that brings all the problems of focusing on correct vs. incorrect, rather than on expression and understanding and on working with language and through language. So context and process, I think, are the two basic elements of a foundation for language, and again I think Halliday's model of language is the best one I can think of as being useful for language teachers, practically useful. For example, Chomsky's Government and Binding model is not useful. There is nothing much you can do with it in language teaching, whereas Halliday's model is something you can get your hands on and actually work with.

Of course, the difference is that whereas one was thought out maybe having language teachers in mind, in the case of Halliday, Chomsky did not have teachers in mind. In fact, sometimes he has said that his model is not one that could be applicable to language teaching.

And rightly so. One of my students recently said that Chomsky's model was not useful because it is not useful for teaching. But it is useful for what it is meant, it was not meant for teaching, as you said. So I think that Government and Binding and all the other stuff, all the other theories of grammar are useful within their own sphere of application. In Chomsky's case it just does not happen to be very directly useful for language teaching, whereas Halliday's is. So one should not compare apples and oranges, they are just different types of grammar for different purposes. So one shouldn't criticise Chomsky by saying his work is not directly applicable to language teaching. It's applicable to many other things, and it may well be indirectly important in ways we cannot fully grasp now.

In your writings, the concept of language awareness has become a very important one lately. How would you define language awareness and in what way do you think it could be applied to the everyday work of language teachers?

The word *awareness* is a funny one because it is very hard to say what it means. But it's an umbrella term that we use. I can't think of a better one. I think it consists of at least three elements, one of which is knowledge about language, knowing something about the language. That's one part of it. The second part is the sensitivity to language as it is used in social settings. And the third one would be a critical perspective of language, i. e. questioning the uses of language including the relation between language and power, racism, sexism and all the other things that are generally manipulated through language, established through language, and maintained through language, so they can only be broken down through language. Language is intimately connected with -and that's Bourdieu again- the ways social structures are set up, so if we want to change social structures we have to understand the role that language plays in them. Otherwise, we would be missing one vital element. I'm not saying social structures are caused by language or

anything like that, I'm not talking in terms of causes. I'm talking about an intricate, complex network of actions, habits and patterns and culturally transmitted norms, regularities and taking for granted types of assumptions. All those kinds of things, those millions of things are all wrapped up in language, which makes it very hard to understand, but in any case, language runs through society as a very basic thread.

In terms of actual teaching practices, if you really want to promote language awareness in your class, what sort of specific things, specific practices should you engage in with your students?

I think collecting is important. If you teach geology, you are going to collect little pebbles. If you teach biology you'll have cages with rabbits, and mice, and birds in the classroom, and fish. If you teach science you'll have magnets and all kinds of things in the room that you work with. If you teach language I think you should collect things that have to do with language and work and play with them. I think that is the main way to raise awareness, playing around with language, not just playing games but doing experiments with it. Seeing how it works, working with it, examining it, analysing it, putting it back together again, trying it out and all the kinds of things you do with tools, toys and games. Working with language in that way you will begin to develop with the students a kind of exploratory approach, an exploring approach to language, rather than a dissecting or knowledge approach. That's the way one would start. Of course, in a sense you are taking away the safety of the language lesson.

You are depowered, so to say, you lose your power, you mean.

As an authoritarian teacher, yes, because you no longer have the gospel of the grammar and the rules behind you. On the other hand, the students don't have that safety either... You no longer know exactly where you are, because things are moving around. It's like the animals are out of the cage and they are running all around the room, you know, when you work with language as it really is, instead of the grammar book. Any text that you take from a newspaper -and that's already cleaned up, because it's written in a newspaper, it's planned writing-, any text that you take and work on any aspect of, whether it's article use, tenses, the passive or any construction in it that you use, and you just underline them and you then compare the results you get from looking at that text to any grammar book, you'll find that there are enormous discrepancies, as if you are talking about a different language. And that just goes to show that the language of the grammar book is not the real language, it's not authentic, it's been murdered to dissect, as Wordsworth said in his poem.

When you talk about reproducing social institutions and changing social structures, it seems that your discourse is a kind of discourse that is becoming more and more unfrequent now in the world of the academia, because it seems that this discourse is sort of Marxist discourse.

Well that's very difficult to do because we have seen in a number of cases how Marxism can easily turn into a dogma, a doctrine, into totalitarianism. Now if you are looking at it in terms of liberation, the approach of Freire, for example, you have to put safeguards into your very work which guard it against it becoming dogma, I think. And then I don't see how that relates to Marxism. I probably don't know enough about it to judge it, but I see very often a tendency towards dogmatism: this is the right path. And then I, as the teacher, am telling you 'this is the right path: the right path is to think the way I think'. And that's dogma, whether it's marxist or capitalist or whatever, it's dogma. What I want to promote is an antidogmatic... a liberation... or a critical pedagogy, which should be by definition antidogmatic, it should have built into it safeguards against dogmatism. How that is to be done is another story.

It's just that sometimes one has the feeling that since the end of the Cold War some people in the world of academia who before wouldn't hesitate to say that their work had a marxist orientation, now they tend to reject that name and use some other name instead.

I don't like to be doing anything really that has any -ist behind it, because I'm sure... I wouldn't say I'm a specialist in Marxism, either in terms of historical studies on stylistics or any of that stuff. I know that the guy had great ideas, but I also think he had some pretty stupid ideas, as most people do and did, so that I would say I'll learn from it what I think I can learn, but I'd rather make my own way and not get into situations where you have to follow an encapsulated body of perceived knowledge. It's the same with Bourdieu, who has also been accused of being a Marxist, and he also would reject the label, because there is some baggage that you like and some baggage that you'd rather not take along with you, and one should have the freedom to say 'I like this but not the other part'. I think it's the same thing.

Also, in your writings you make a clear distinction between knowledge and values, when it comes to promoting language awareness, autonomy and authenticity in the language classroom. How can the two be reconciled?

I think that I am making the distinction in order to make the point that we have focused most of the time on knowledge and not often on values, and when we have focused on values we have focused on them as a totally separate sort of thing from knowledge, as something that has intrinsically nothing to do with the curriculum. Rather than distinguishing between knowledge and values I would like to see them as one unity. So in a sense I don't want to distinguish, I mention both in order to argue that they should both be present, but in a yin - yang sort of way, not separable. Rather than distinguish between them, I would say that they should both be there in our thinking of how the curriculum should be. If you separate them, then you get the nonsense of, for example, the current British government with its 'back to basics' stuff, because they see, I think, academic knowledge as one thing and moral values as another thing which has to be done totally on its own: a separation, while I would much rather see it as an organic unity, not as an afterthought or as two separate subjects, as it were, because if it's a separate subject then you have

moral values in one class and knowledge in another. I don't think that is the way to go at all. When we do language education, and in the language curriculum, I think knowledge and values should be inseparably connected, integrated in our principles.

So there wouldn't be on the one hand a scientific curriculum and on the other hand the moral or ethical curriculum.

They would have to be on the same hand.

They should be on the same hand, but people still understand them as being two completely different perspectives.

And why? Because I think if you look at our theories and our methods over the years, even including the humanistic -so-called humanistic- ones, there is nothing in them in terms of basic purposes for which we learn. If they have any substance to them, the humanistic methods have to do with values such as 'be nice to the students' and that sort of stuff, which is very trivial.

And 'make them happy'.

Lado already said in his principles of language teaching many years ago that it's not our business to assume that all learning should be fun. That doesn't mean it should never be fun, but the purpose is not to have fun. The purpose is to learn. Now, if that can be done with fun it's fine, but we should not go in there expecting that it should all be fun, and we have been going through several decades. I think, of this obsession with 'it must be fun, if it's not fun it's boring. Therefore, I don't go'. We have to put the challenge back into it, but in a stimulating way, and not sort of try to slice everything off and leave the fun, and empty it of everything else. I think it's very different to build a curriculum which is based on knowledge and values as inseparable principles, because then you could put challenge back into it, and fun, too.

In spite of the communicative approach to language teaching, it seems that language teachers still confront the dilemma between grammar and natural interaction. One sometimes has the impression that it's impossible not to take sides, either you have to side one or the other, but it's very difficult to make them compatible in your teaching. Now, how does your concept of contingency grammar attempt to tackle this problem?

The first distinction that has to be looked at, whether you talk about communicative approaches or other ones, is the distinction between grammar and interaction. Grammar is still in the minds of most people, including teachers and text book writers, associated with written language. You open the book and the utterances in there are basically sentence units, sentential units if the text has been written down. The spoken language has been written to be spoken, the grammar that we teach is

almost invariably the grammar of written English. Halliday in 1989 published a book called *Spoken and Written English*, in which he makes very interesting comments on the differences between spoken and written language. We usually still define the spoken language as being somehow faulty in terms of its grammar: it doesn't have full sentences, it has false starts, hesitations, etc. So we really hold it up against the yardstick of written language and say it's not quite the same, it's not really that grammatical. Instead, however, we should redefine grammar and say that if we speak about spoken language, we should look at the grammar of spoken language. If we speak about written language, we should look at the grammar of written language. We should realise that those are two different grammars. The grammar of spoken language has a number of characteristics which are totally different from the grammar of written language. Different constraints operate in the two domains, so that you cannot look at spoken language through the spectacles of the grammar of written language. It's inappropriate, it's a different grammar. That doesn't mean it's a simpler grammar. It's a very complex grammar, it is just as systematic and just as hard to learn, even harder, very often, because you cannot put it into words. It's an intuitive type of knowledge, rather than an explicit, verbalisable type of knowledge. You need to cope with and understand the grammar of spoken language. And think of the whole area of collocation, it is very hard to put in terms of grammatical rules. So that's one thing: we have to redefine grammar, and if you redefine grammar, then I think the opposition between natural interaction and grammar becomes less, it becomes a different kind of question. How does contingency grammar fit into this? Well, contingency grammar basically looks at ways in which we make a language contingent. Making language contingent means, first of all, link it to other language. And, second, leave it open-ended so that it points to language yet to come. So it's contingent in both ways. It is contingent because it depends on something else and it's contingent because it raises expectations about what is to follow. That's the essence of language use in general, I think, but particularly in spoken language, because it goes on auditorily through time, it's here today and gone the next moment, so it has to hook on to things that have just happened, that are going to come. It's expanding. It moves through time. The grammar of contingency tells how our utterances are related to utterances that other people have just said and utterances that are going to be said next. Those relationships, I think, form the key, the essence to language understanding. If we can bring contingency in the classroom, then we have resolved the grammar vs. interaction issue, it's no longer an issue.

When you talk about retrospective and prospective relations, do you talk about them in functional terms or in both functional and structural terms?

The form- function distinction is an interesting one.

Would it be applicable to contingency grammar?

I think it's a bit like Polanyi said, when he said about language that sometimes you look right through the words and they are transparent, and you only look at the meanings. Sometimes you stop at the word because there is something that arrests your attention, which could be because the word is unexpected, it's funny, or

because you don't know it, because your knowledge is inadequate, or you didn't expect it for some reason. You have to learn something new. Then you stop at the word and work with it. That's when you are looking at the word structurally, in formal terms. You turn it around, you look at it, not just in terms of form on its own but in terms of form and meaning at the same time. Other times you go right through, you don't even notice the form, you go right to the meaning. The form-function distinction, if you look at it this way, means that you only need the form when there is some trouble, in whatever you are doing. If you take a task-based approach you will see that very often students will talk about the form to each other. Why do they talk about it? Because they are trying to solve the problem in their task to reach the next... to get ahead, to reach the next stage, to get the job done. So the distinction between form and function, again, is negated, is nullified, or is levelled in a proper... in a real task based approach, and you wouldn't have to worry about it, you shouldn't have to worry about it. It will come up when it'll come up, and if it won't, it won't. In a sense the grammar, the focus on form comes out of working with the language in order to do things. That's a very functional approach. I would call it that, anyway.

From a methodological point of view your work on language and education seems to take a clear stand in favour of a qualitative vs. a quantitative approach, or at least that is the impression one gets from your writings. What are the main reasons for this? How would you justify to somebody who has usually done quantitative language analysis your qualitative approach?

Well, in general I think there's room for both. I think both types of studies need to be done, so at first there is an issue of personal preference. Some people like doing this, some people like doing that. That's fine. There's room for both types of work. I think there's value to both types of work, but there are several problems with the quantitative approach to language teaching research. One is that I think, in general, you cannot model social sciences on the natural sciences. That's faulty. In the natural sciences you can often work on the cause-effect type of model of the way things work, you have a cause and you have an effect. You heat a piece of metal and it will get longer and it'll get hot. But in the social sciences you cannot do this. There's too much of a complex interrelationship of factors and all operate on one another. Very often any effect has a backward causal effect on the cause itself, so we have causality working backwards, which is in a sense totally anathema to the very concept of causation which means cause - time differential - effect. It has to be that way. So you cannot model the social sciences on the natural sciences, it's a reductive fallacy to do so. Secondly, the goal of social science research, including research on learning, on language learning, is an understanding of the processes with a view to improving them, I would imagine. Numbers generally do not aid in understanding. You are not going to understand something better by counting them. If you don't know where it is, why count it? It won't lead you to understand it better. We fool ourselves if we think that by counting things we are going to get a grip on them. In fact, very often, as Minsky said, we use quantities when we don't know how to judge the qualities of things, but there's no replacement, you see. It's, in a sense, fooling ourselves. We cannot solve the problems in a quantitative manner. Sometimes quantification is very useful if you want to see such things as how many students drop out of school and whether that relates at all to the racial composition

of the group. That's very, very useful, because it can tell you that we have a very big problem. It doesn't tell you how this happened. And then you have to go in and find out how it happened. Then you have to find out what to do about it. The counting only set the problem in a sharp light, so that you can then go in and do some work on it. So the role, then, of quantification is totally different in the social sciences than it is in the physical sciences. Yet we have operated for decades under the assumption that the best, the ultimate type of work that we can do is quantitative work. Any other type of work is at best preparatory for it. I think it is the other way around in our kind of field. Any quantitative work should be ancillary to the real work, which is understanding something in order to improve it. Another point, of course, is that quantitative work grew up in the era of positivism, where you believe that ultimately you can find proof for things, proof, that x causes y . Positivism has been replaced in the social studies by more humanistic, or interpretive or quantitative, whatever you call it approaches in a general sense. Positivism, in general, in the social sciences is more or less dead, apart from the fact that in many universities and in many research institutions they are still working within its parameters. Officially it has been declared dead for several decades now. What has replaced it is a much more interpretive way of working. Phenomenology, for example, and ethnography, are ways of trying to understand complex social processes which are quite different. Bourdieu's theory of practice is an attempt to do rigorous work without falling into the positivistic traps and without falling into the opposite trap, which is the trap of subjectivism, which is what some people will tend to fall into... from one hole into another, which doesn't do anybody any good, either. Another interesting development is chaos theory. Chaos theory basically looks at the complexity of things that are unpredictable, for example if you look at turbulence when you mix liquids or gases in a cylinder or, in a bigger sphere, outside in the weather when things happen, how storm systems form and so on. Very often it's unpredictable how this thing starts and then you create patterns which can be predicted, so that chaos, chaotic things can turn into patterned things, random things can become regular and regular things can become random. This is in physics. In social sciences I think a lot of the same kind of stuff goes on if you look through history. Certainly, history repeats itself, but very often it doesn't, either, and we can never know, at one moment of time, what is going to happen next. Chaos theory says that very small changes can cause enormous changes and create patterns out of nothing. This is a very good thing to think of when we are in a classroom talking to our students, because it means that if we basically think that there is power in that notion that tiny changes can effect great revolutions, as it were, then our way of speaking to children can make a big difference. Of course, we know it can make a big difference to that child, but even further it might make enormous differences in the long run to the entire society, so that when we want to make a revolution in a sense we would go about it the wrong way if we wanted like Marx to unite the whole globe. You know what happened to that idea. But if we worked at our own level, patiently, at the things that we can change, we might actually be building stronger changes by making the small ones in interaction with the students that we are teaching. So chaos theory, then, coupled with interaction in education can actually give us a way to seek innovation and to do reform where large-scale reforms in the past have tended to fail miserably.

Just to close the interview we would like to look a bit ahead. Could you tell us about your future projects? You have recently become Director of the Centre for Language in Education and Work (CLEW) at the Monterey Institute for International Studies, what are the main objectives of this centre and in which way do they fit in with your research interests for the future?

One of the things that I've always wanted to do at the Institute and that the Institute in general is interested in, and has been interested in, is to reach out to the community and work with local teachers. So one thing we certainly want to do is offer whatever advice we can give to teachers who have to work in bewildering circumstances with multi-ethnic, multilingual classrooms, with very few resources, with very little guidance in general. What we would like to try and see is if there are ways in which we can help these teachers gain more control, to find their own ways of working with these situations and find solutions for the problems that they face every day. That's the local level. At the global level we'd like to see - it actually goes from local to global- how we can build relationships between schools and the rest of the world. Schools tend to be very isolated places. People finish school and have to find a job. It's a totally different discourse world. However, you can try and build better relationships between the school and the work place, in a number of ways like apprenticeship programmes, or secondment, or bringing people from business to talk. In addition to that, of course, bringing parents more into the school, and improve the relationship between teachers and parents and schools and parents so the whole network of relationships... putting the school in closer contact with the community and making the transition from one to the other easier on a day-to-day basis, as well as in the long run when people have to get out and go to other schools or to find jobs in industry or business. That's another purpose. That's the second purpose. And the third purpose would be to promote intercultural and international education. People tend to be very narrowly-focused, very myopic, when it comes to seeing how other people live and in their relationships with other countries. There's lots of prejudice, stereotyping going on. Maybe we'd like to find ways of teaching world knowledge, global education. So those are the three main purposes of the centre.

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